

Appendix A Annual Nutrient Budget Jobsheet

Producer: _____ Field No/Ac: _____

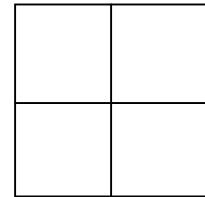
Soil Type: _____ Tract No: _____

Soil Texture (circle): Coarse, Medium, Fine Slope %: _____

Legal: _____

<i>Application Timing</i>	<i>Nitrogen Leaching Potential: (1)</i> <i>Circle</i>		
Fall Applied	(Low)	(Med)	(High)
Spring Applied	(Low)	(Med)	(High)
Sidedress Applied	(Low)	(Med)	(High)

Crop _____ Realistic Yield (2) _____



<i>Nutrient Budget</i>						
	Parts per million					
	N	P	K	S	Zn	Fe
Soil Test Values (3)						
	N	P ₂ O ₅	K ₂ O	S	Zn	Fe
Nutrient Recommendation in Lbs./acre (4)						
CREDITS (lbs/ac): Irrigation Water (5)						
Manure Nutrient (6)						
Previous Crop (7)						
Other Sources						
Nutrient Recommendation (after credits are subtracted) in lbs./acre (9)						

% Organic Matter _____

Soil pH _____

NOTES/RECOMMENDATIONS (8)

<i>RECOMMENDED APPLICATION (10)</i>								
	Form	Lbs/gals/ tons/ac in. per acre	Lbs./acre					
			N	P ₂ O ₅	K ₂ O	S	Zn	Fe
Fall Commercial								
Spring Commercial								
Starter								
Sidedress								
Chemigation								
Manure/Organic								
Other Fertilizer								
Total lbs/Acre								
N-Inhibitor used	YES _____ NO _____							

<i>ACTUAL APPLICATION (11)</i> Lbs./acre						
N	P ₂ O ₅	K ₂ O	S	Zn	Fe	
YES _____ NO _____						

Actual Crop Yield (12) _____

ANNUAL NUTRIENT BUDGET INSTRUCTIONS

General Instructions:

A separate nutrient budget is usually needed whenever any of the following exist:

- ◆ Soil tests are significantly different (each test should not represent an area greater than 40 acres).
- ◆ Different crops i.e. corn versus sorghum
- ◆ Different expected yield (yield monitor yield data may be averaged if appropriate)
- ◆ Previous crop (legume N credit)
- ◆ Different manure history
- ◆ Any other significant differences that affect nutrients recommended i.e. bottomland versus upland

1. Nitrogen leaching potential (circle the risk of N leaching based on the timing of application and the soil texture) :

Timing of Application	Soil Texture		
	Coarse	Medium	Fine
Fall Application	High	Medium-Low	Low
Spring Application, Pre-plant	High-Medium	Medium-Low	Low
Sidedress or Split Application	Medium-Low	Low	Low

- ◆ This table provides an indication of leaching potential based on soil texture and application timing, and used to make appropriate management adjustments (e.g. timing, method and formulation of manure/fertilizer applied) to avoid excessive leaching losses of nitrogen.
- ◆ Coarse texture (sand, loamy sand, sandy loam); medium texture (silt, silt loam, loam); fine texture (silty clay loam, silty clay, clay, clay loam, sandy clay loam, sandy clay).
- ◆ Fall applications should occur after soil temperature is 50 degrees or less, or a nitrification (N) inhibitor is advised.

2. Realistic Yield (crop to be planted/harvested):

- ◆ Based on a five year average plus 5% (For example, if the five year average is 100 bushels, a realistic yield would be 105 bushels).

3. Soil Test:

- ◆ Record values in ppm based on most current soil test (Assume a value of 3 ppm of N following legumes unless manure has been applied recently). It is important to use the appropriate test method for your soil type (refer to the appropriate NebGuide(s) to determine the appropriate test method).
- ◆ Deep samples for nitrate should be completed as close as possible (just prior) to fertilizer/manure application. Surface samples should be taken during the same time of the year (in subsequent years) to determine nutrient trends. Additional guidance is found in Neb-Guide G91-1000-A "Guidelines for Soil Sampling".
- ◆ *Non-legume crops following non-legume crops (i.e. corn, sorghum, grass, small grains)* – Annual deep sampling of (at least two foot) for nitrates. Surface samples for all nutrients (including nitrates), buffer pH/pH, and organic matter at least every three years.
- ◆ *Perennial legume crops* – Surface sample for all nutrients (other than nitrates), buffer pH/pH, and organic matter (sandy soils) should be completed once, prior to planting the legume (tests within the last three years may be used). Nitrate tests are not necessary.
- ◆ *Annual legume crops* – Surface sample for all nutrients (other than nitrates), buffer pH/pH, and organic matter (sandy soils) at least once every three years.
- ◆ *Non-legume crops that follow legumes* – Nitrate tests are not necessary following legumes unless manure or other organic nutrient sources have been applied recently. Use an assumed value of 3 ppm of nitrate for residual credit in addition to legume credit given in item 7. Surface samples for nutrients (other than nitrates), buffer pH/pH, and organic matter (sandy soils) at least once every three years.

4. Nutrient Recommendation (lbs/ac):

- ◆ UNL recommendations of nutrients in pounds/acre based on soil test values prior to subtracting other credits (Refer to appropriate Neb-Guide or UNL soil test program for recommendations, soil-testing labs can provide UNL recommendations on request).

5. Irrigation Water N Credit:

- ◆ Irrigation water source is analyzed for nitrate content (tests should be done during the irrigation season).
- ◆ Credit N in irrigation water if concentration is 10 ppm or greater.
- ◆ N is credited based on normal seasonal application rates, or as follows: 6" (east), 9" (central), 12" (west), or 15" (panhandle).
- ◆ Pounds of N/acre credited = (inches pumped X ppm nitrate X 2.7) ÷ 12

6. Manure Nutrient Credit:

- ◆ Total quantity in tons/ac or gallon/acre should be calculated from prior and current year manure applications.
- ◆ Record pounds of N, P and K and other nutrients credited from prior and current manure applications (manure has already been applied).
- ◆ Credit is based on a manure test, and/or Neb-Guide G97-1335-A "Determining Crop Available Nutrients".

7. Legume N Credit (previous years crop):

- ◆ Pounds of N credited is based on Nebraska Conservation Planning Sheet 11 "Nutrient Management" or Neb-Guide G94-1178-A "Fertilizer Nitrogen Best Management Practices", or University of Nebraska "Soil Test Program".

8. Notes/recommendations:

- ◆ Record special information such as considerations used for form, timing, placement of nutrients, or adaptations made to nutrient plan.

9. Nutrient Recommendation(after credits):

- ◆ Record nutrient required after subtracting nutrient recommended minus other credits

10. Fertilizer/Manure Recommendation (based on soil test recommendations minus other credits):

- ◆ Record formulation (i.e. 84-0-0 for anhydrous, 10-34-0 for starter), lbs/gallons/tons/acre inches per acre of each type of fertilizer/manure recommended, total pounds/acre of each nutrient to be provided by fertilizer/manure, and whether an inhibitor was used or not.

11. Actual Fertilizer Application (lbs/ac):

- ◆ Record the actual amount of nutrients applied by each type of fertilizer in lbs/acre.

12. Actual Crop Yield (in bushels, pounds, or tons per acre):